

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 - 28. (Cancelled)

Claim 29. (Currently Amended) A method for producing a pulse train, comprising the steps of:

providing a source of a constant amplitude, ~~frequency modified wavelength modulated~~ optical signal;

providing a dispersive element;

matching a chirp of the dispersive element with a cycle of the ~~frequency modulated constant amplitude, wavelength modulated~~ signal; and

directing the constant amplitude, wavelength modulated signal into the dispersive element;

wherein the source is a ~~frequency modified wavelength modulated~~ laser, and wherein the dispersive element is a long fiber Bragg grating.

Claim 30. (Previously Presented) The method of claim 29, wherein the source is a single longitudinal mode source.

Claim 31. (Canceled)

Claim 32. (Currently Amended) The method of claim 29, wherein the source comprises a laser ~~equipped with~~ having a reflective element, and wherein the signal is ~~frequency wavelength~~ modulated by applying a current across the reflective element.

Claim 33. (Previously Presented) The method of claim 32, wherein the current modulates the center wavelength of the reflective element by way of carrier induced index changes.

Claim 34. (Canceled)

Claim 35. (Currently Amended) The method of claim 29, ~~further comprising:~~  
~~sending a frequency modulated signal to the frequency modified laser,~~ wherein a frequency of the ~~frequency~~ wavelength modulated signal is about 100 MHz or less.

Claims 36-38. (Canceled)

Claim 39. (Previously Presented) The method of claim 29, wherein said matching further comprises matching a high order dispersion component of the dispersive element with residual nonlinear chirp.

Claim 40. (Currently Amended) The method of claim 29, wherein the source comprises a non-mode-locked ~~frequency modified~~ wavelength modulated laser.

Claim 41. (New) A method for generating a pulse train, comprising the steps of:  
providing a continuous wave (CW), frequency modulated (FM) signal; and  
impinging the CW FM signal on a dispersive element, said dispersive element being adapted to compress the signal in time, wherein an output signal from the dispersive element comprises a pulse train.

Claim 42. (New) The method of claim 41, wherein the dispersive element comprises a fiber Bragg grating.

Claim 43 (New) The method of claim 41, wherein the dispersive element is a single mode fiber.

Claim 44. (New) The method of claim 43, wherein the fiber has a length of at least about 40 km.

Claim 45. (New) The method of claim 41, wherein the CW FM signal is generated by a laser having a reflective element, and wherein the signal is frequency modulated by applying a current across the mirror.

Claim 46. (New) The method of claim 45, wherein the current modulates the center wavelength of the reflective element by way of carrier induced index changes.